


# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PU030229	<b>FOR FURTHER ACTION</b>		See Form PCT/IPEA416
International application No. PCT/US2004/017842	International filing date ( <i>day/month/year</i> ) 04.06.2004	Priority date ( <i>day/month/year</i> ) 30.07.2003	
International Patent Classification (IPC) or national classification and IPC H04N9/31			
Applicant THOMSON LICENSING S.A. et al			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 7 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p style="margin-left: 20px;">a. <input type="checkbox"/> <i>sent to the applicant and to the International Bureau</i> a total of    sheets, as follows:</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p style="margin-left: 20px;">b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>			
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I    Basis of the opinion</p> <p><input checked="" type="checkbox"/> Box No. II    Priority</p> <p><input type="checkbox"/> Box No. III    Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV    Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V    Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI    Certain documents cited</p> <p><input type="checkbox"/> Box No. VII    Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII    Certain observations on the international application</p>			
Date of submission of the demand  28.01.2005		Date of completion of this report  22.07.2005	
Name and mailing address of the international preliminary examining authority:   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized Officer  Güvener, C  Telephone No. +49 89 2399-4934	



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International application No.  
PCT/US2004/017842

AP2004017842 30 JAN 2006

## Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
  - ☐ This report is based on translations from the original language into the following language, which is the language of a translation furnished for the purposes of:
    - ☐ international search (under Rules 12.3 and 23.1(b))
    - ☐ publication of the international application (under Rule 12.4)
    - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements\*** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

### Description, Pages

1-14 as originally filed

### Claims, Numbers

1-20 as originally filed

### Drawings, Sheets

1/8-8/8 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
    - ☐ the description, pages
    - ☐ the claims, Nos.
    - ☐ the drawings, sheets/figs
    - ☐ the sequence listing (*specify*):
    - ☐ any table(s) related to sequence listing (*specify*):
  4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
    - ☐ the description, pages
    - ☐ the claims, Nos.
    - ☐ the drawings, sheets/figs
    - ☐ the sequence listing (*specify*):
    - ☐ any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

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**Box No. II Priority**

1. ☐ This report has been established as if no priority had been claimed due to the failure to furnish within the prescribed time limit the requested:
- ☐ copy of the earlier application whose priority has been claimed (Rule 66.7(a)).
  - ☐ translation of the earlier application whose priority has been claimed (Rule 66.7(b)).
2. ☒ This report has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rule 64.1). Thus for the purposes of this report, the international filing date indicated above is considered to be the relevant date.
3. Additional observations, if necessary:

**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	2-5,8-14,16-19
	No: Claims	1,6,7,15,20
Inventive step (IS)	Yes: Claims	
	No: Claims	1-20
Industrial applicability (IA)	Yes: Claims	1-20
	No: Claims	

2. Citations and explanations (Rule 70.7):

**see separate sheet**

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REPORT ON PATENTABILITY  
(SEPARATE SHEET)

International application No.

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IAP20 Rec'd PCT/PTO 30 JAN 2006

Re Item V.

- 1 The following document are referred to in this communication:

D1: US-B-6 445 5051 (MORGAN DANIEL J) 3 September 2002 (2002-09-03)  
D2: US-B-6 567 1341 (MORGAN DANIEL J) 20 May 2003 (2003-05-20)

2 INDEPENDENT CLAIM 1

- 2.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

Document D1 discloses (the references in parenthesis applying to this document):

A method for operating a sequential color display system including a color changer and an imager, which operate in combination to sequentially illuminate at least one pixel with each of a set primary colors (abstract; fig. 1), comprising the steps of:

applying a control signal to the imager to cause the imager to illuminate at least one pixel for each primary color at a brightness level in accordance with the control signal (col. 1, lines 33-52);

using light occurring during at least one first spoke, corresponding to a first interval when the color changer transitions from one color to another, when at least pixel has a brightness level above a first prescribed threshold for at least one color (col. 6, lines 51-61 and col. 7, lines 28-44); and

altering the control signal when the light is used during such spoke to decrease brightness of at the least one color in substantial time proximity to the occurrence of the spoke to compensate for the brightness increase caused by using the light during such spoke (col. 11, lines 20-23).

Therefore the subject matter of claim 1 is not new (Article 33(2) PCT).

- 2.2 It should be noted that the main idea of the teaching of D1 is the use of white spoke light which is done by averaging the light of the individual spokes that occur upon rotation of the color wheel, whereas the present application is more concentrated on

the use of individual spokes.

However, the subject matter of claim 1 falls within the scope of the teaching of D1 because there is no indication in the claim that a single spoke will be used independently of the other spokes and the brightness of only a single primary color will be decreased.

Furthermore, the individual use of spoke periods is also anticipated as an additional feature in D1 (see col. 12, lines 15-29).

2.3 In claim 1, the feature of decreasing the brightness in substantial time proximity is not ~~formulated in such a manner that it would add anything to the novelty or~~ inventiveness of the subject matter of the claim because the term is vague and unclear and does not suggest any restriction on the time difference between the occurrence of the spoke and the decrease of the brightness.

### 3 INDEPENDENT CLAIM 7

3.1 The independent claim 7 includes the features of claim 1 except that the "control signal" in claim 1 is replaced by the "plurality of pulse width segments". As the device disclosed in D1 involves a DMD, it is an implicit feature that the control signal contains pulse width segments (see also col. 11, lines 45-52).

Therefore, the subject matter of the independent claim 7 is also not new (Article 33(2) PCT).

### 4 INDEPENDENT CLAIM 15

4.1 The subject matter of claim 15 corresponds in terms of system features to that of claim 1. Therefore the negative opinion regarding the claim 1 also applies, mutatis mutandis, to independent claim 15 of which the subject matter is thus not new.

### 5 INDEPENDENT CLAIM 11

- 5.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 11 does not involve an inventive step in the sense of Article 33(3) PCT.

The subject matter of independent claim 11 comprises the features of claim 7 which is not new and the additional feature "... to decrease pixel brightness during the pulse width segments occurring substantially immediately before and after the at least one first spoke in order to compensate for the brightness increase from the spoke light".

The vague and relative term "substantially immediately before and after" does not introduce any restriction on the time when the "altering step" is applied and thus it does not indicate how the intended technical effect is achieved. Therefore the subject matter of claim 11 does not contain any additional feature that meets the requirements of Article 33(1) PCT in respect of inventive step.

## 6 DEPENDENT CLAIMS

- 6.1 Dependent claims 2-6, 8-10, 12-14, 16-20 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step, the reasons being as follows:
- 6.2 The additional features of dependent claims 6, 20 are also disclosed in D1 (see col. 11, lines 45-52).
- 6.3 The subject matters of claims 2 and 16 do not involve an inventive step for the same reason as mentioned in paragraph 5.1.
- 6.4 The subject matters of 3, 4, 5, 8, 9, 10, 12, 13, 14, 17, 18, 19 appear to be obvious measures for the skilled person, in the light of the teachings of D1 and D2 which are in the same technical field, for the following reason:

The difference of the subject matters of said claims from D1 is that they use different first and second threshold values for different primary colors. The technical problem to be solved by said claims appears to be using the spoke light also for saturated

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images.

The document D2, which is in the same technical field, discloses a method that uses the spoke lights not only to boost the white level of de-saturated images but also to boost the secondary colors of saturated images (see D2 abstract; col.9, line 54-col.10, line 35). Therefore it appears to be an obvious option to include the additional features of the subject matters of said claims in a method like the one disclosed in D1.

7 REMARKS

~~7.1~~ Although ~~claims 1, 7, 11~~ have been drafted as separate independent claims, they appear to relate to the same subject-matter and to differ from each other only with regard to the definition of the subject-matter for which protection is sought. The aforementioned claims therefore lack conciseness and as such do not meet the requirements of Article 6 PCT.